



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,914	02/07/2006	Jan Kristenson	P09965US00/MP	5898
881 7590 09/02/2011 STITES & HARBISON PLLC 1199 NORTH FAIRFAX STREET SUITE 900 ALEXANDRIA, VA 22314			EXAMINER MILLER, SAMANTHA A	
			ART UNIT 3749	PAPER NUMBER
			NOTIFICATION DATE 09/02/2011	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

iplaw@stites.com

Office Action Summary

Application No.

10/567,914

Applicant(s)

KRISTENSON ET AL.

Examiner

SAMANTHA MILLER

Art Unit

3749

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-18, 20, 21, and 15-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-18, 20, 21, and 15-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 December 2010 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 9/13/2010
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

The amendment filed on 12/8/2010 is acknowledged.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "outer part is thicker than the inner part", "air discharge opening", "discharge opening", and "a plurality of substantially parallel passage" must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 25 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification does mentions a porous material offers resistance to air; however the limitation **"a porous material of sufficient thickness to offer resistance to air"** is not in the original specification. The specification does not mention **"an air discharge opening"** or **"the discharge opening"**.

Claims 13 and 25 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Though the specification does mention **"a plurality of substantially parallel passages"** are **"of uniform thickness"**, having **"substantially the same diameter along is entire length"** the drawings and description of the invention do not make this

possible. The passages are arranged along a part of a circle; if the passages are of uniform thickness it would be impossible for the passages to be substantially parallel since they would be radial; as shown in applicant's Fig.1. For the purpose of the rejection below "substantially parallel will be considered "radial". Claim 25 also says the passages are **"generally rectilinear"**; however the cross-section of the passages shown in Fig.3 clearly shows the passages are circular or cylindrical and is described in Claim 4. Rectilinear is to be defined by straight lines; to be circular cylindrical is to be defined by rounded lines. For the purpose of the rejection below "generally rectilinear" will be considered to mean the from the front view the passages look rectilinear. Claim 13 recites the limitation **"where the outer part is thicker than the inner part"**, the specification does not describe this and Fig.1 shown the inner part slightly thicker than the outer part.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 5, 16-18, 20-21, and 25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 5 recites the limitation "wherein all or almost all passages are of equal length" it is unclear what is considered to be "almost all passages". For the rejection below "almost all passages" will be considered some passages.

Claim 16 recites the limitation "the body" in line 2. There is insufficient antecedent basis for this limitation in the claim. For the rejection below "the body" will be considered the discharge opening.

Claim 17 recites the limitation "the air permeable body" in line 2. There is insufficient antecedent basis for this limitation in the claim. For the rejection below "the air permeable body" will be considered the discharge opening.

Claim 18 recites the limitation "the air permeable body" in line 2. There is insufficient antecedent basis for this limitation in the claim. For the rejection below "the air permeable body" will be considered the discharge opening.

Claim 20 recites the limitation "the discharge opening" in lines 4-5 and 7. There is insufficient antecedent basis for this limitation in the claim. For the rejection below "the discharge opening" will be considered the outlet of the air supply tube.

Claim 21 recites the limitation "extends along at least a part of the width of the door" it is unclear what is considered to be "a part of the width". For the rejection below "a part of the width" will be considered any width less than or equal to the width of the door.

Claim 25 recites the limitation "the discharge opening" in lines 6, 8, and 9. There is insufficient antecedent basis for this limitation in the claim. For the rejection below "the discharge opening" will be considered the opening at the air supply tube.

Claim 27 recites the limitation "the discharge opening" in line 2. There is insufficient antecedent basis for this limitation in the claim. For the rejection below "the discharge opening" will be considered the opening at the air supply tube.

Claim 28 recites the limitation "the discharge opening" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim. For the rejection below "the discharge opening" will be considered the opening at the air supply tube.

Claim 25 recites the limitation "a porous material of sufficient thickness" it is unclear what is considered to be a "sufficient thickness". For the rejection below "sufficient thickness" will be considered the thickness of the porous material that creates resistance.

Claim 25 recites the limitation "substantially laminar" it is unclear what is considered to be "substantially laminar" since air has to be either laminar, in transition, or turbulent. For the rejection below "substantially laminar" will be considered not turbulent.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 5-8, 10-18, 20-21, 25-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over KRISTENSSON (5,167,577) in view of German patent (DE 2608792 A) in further view of STRONGIN (5,716,268).

KRISTENSSON teaches:

Claim 6; wherein the passages (cellular pores) are located close to each other and connected to each other (col.3 ll.5-11).

Claim 7; the passages are made of a plastic material (col.3 ll.5-11).

Claim 8; the passages are made of a metallic material (col.3 ll.14-18, wire is a metal).

Claim 10; the passages are interconnected by fusing (the process of coating with the PVC material is fusing, col.3 ll.5-11).

Claim 11; the porous material of the inner part (13) is designed to permit filtration of air flowing through said porous material in order to obtain a low content of particles in the premises (being a filter material, col.3 ll.5-11).

Claim 12; the porous material of the inner part consists of foamed plastic with open cells (col.3 ll.5-11).

Claim 14; the outer part (the layer of PVC col.3 ll.5-9; or 16 col.3 ll.20-24) consists of a heat resistant material (col.3 ll.19-24).

Claim 15; the inner (13) and outer parts (the layer of PVC col.3 ll.5-9; or 16 col.3 ll.20-24) are connected to each other (the process of coating with the PVC material is fusing, col.3 ll.5-11).

Claim 16; the body/discharge opening (9) is in cross section shaped as a semicircle or substantially as a semicircle (Fig.1 shows 9 as the same shape as applicants Fig1; a semicircle or substantially as a semicircle).

Claim 17; the air permeable body/discharge opening (9) is in cross section shaped as a quarter of a circle or substantially as a quarter of a circle (Fig.1 shows 9 as the same shape as applicants Fig1; a quarter of a circle or substantially as a quarter of a circle).

Claim 18; the air permeable body/discharge opening (9) is shaped as a spherical segment or as a substantially spherical segment (Fig.1 shows 9 as the same shape as applicants Fig1; a spherical segment or as a substantially spherical segment).

Claim 20; wherein the housing (1) is located sufficiently below a ceiling (ceiling of the room shown in Fig.7) of the premises that impure air is gathered in an upper zone (at 8 above the ceiling) closest to the ceiling of the premises (shown in Fig.7), at least one air outlet (8) for impure air is provided at the ceiling of the premises (shown in Fig.7), and the discharge opening (9) is located beneath the upper zone (at 8 above the ceiling, Fig.7) such that substantially no impure air is co-ejected out of the upper zone by the air streams through the discharge opening (col.2 ll.29-42).

Claim 21; the discharge opening (9) is located above a door (door to the room shown in Fig.7) to the premises (2) and is elongated and extends along at least a part of the width of the door (the discharge opening being the size of a human head shown in Fig.7 it would be a part of the width of the door shown in Fig.7).

Claim 25; a housing (1) having an air inlet (7) to which air is supplied under pressure (from fan 8a) and an air discharge opening (9) positioned to discharge air from the housing having a lower temperature (cool) than that of the premises (col.2 ll.18-19 and 38-40), the discharge opening (9) including an inner part (13) covering the discharge opening and formed of a porous material (col.2 ll.50-55) of sufficient thickness to offer resistance (col.3 ll.16-18) to air from the air inlet (7) flowing through the discharge opening (9), the discharge opening further including an outer part (either PVC layer mentioned col.3 ll.5-9 or covering col.3 ll.20-24) located adjacent to

essentially the entire exterior of the inner part (Fig.1), the outer part comprising a plurality of passages (cellular pores) which are packed together against each other (col.3 ll.5-24), the passages having inlet ends adjacent the exterior of the inner part and positioned to receive the air which passes through the inner part (col.3 ll.5-24), such that the partial airstreams coming out of the outlet ends (passages of either the PVC material or 16 are partial air streams of air inlet 7) and into said zone (3) are substantially laminar (col.2 ll.55-59), providing uniformly distributed partial airstreams (passages of either the PVC material or 16 are partial air streams of air inlet 7) of reduced turbulence in said zone (col.2 ll.55-59).

Claim 26; the partial airstreams define a central reduced turbulence distinct zone (3) surrounded by a relatively narrow (since 3 is a wide central reduce turbulence zone col.4 ll.16-18; the surrounding turbulent zone would be narrower than when the central reduce turbulence narrow zone 4 is in use, Figs. 2-3).

Claim 27; a fan (8a) positioned to direct pressurized air at a low velocity (col.3 ll.25-30) through the housing and out the discharge opening (9).

Claim 28; the discharge opening (9), the inner part (13) and the outer (either PVC layer or 16) part have the shape of part of a circle (Fig.1 shows 9 as the same shape as applicants Fig.1; a part of a circle)

Claim 29; device (8c) for supplying air to the air inlet (7) at a lower temperature than the air in the premises (2) (col.2 ll.18-19 and 38-40), said device supplying air at such a temperature (cool) that the air descends to a low level in the premises (2)

(inherently because cool air is denser than warm air so cool air drops and warm air rises, so the cooler than the premises air will drop; col.2 ll.18-19 and 38-40).

Claim 30; device (8c) for supplying air to the air inlet (7) at a lower temperature than the air in the premises (2) (col.2 ll.18-19 and 38-40), wherein said device is a cooling device (col.2 ll.18-19 and 38-40).

Kristensson discloses the invention above including a thin outer layer, however Kristensson does not teach all or almost all passages are of equal length, the passages are defined by tubes, the outer part is thicker than the inner part, a plurality of substantially parallel passages, the passages extending outwardly away from the inner part to outlet ends, the passages being generally rectilinear and of uniform thickness, or each passage having substantially the same diameter along its entire length from its inlet end to their outlet end.

The German patent teaches (please refer to the English translation provided by the applicant for correlating lines):

Claim 5; all or almost all passages (3, jet) are of equal length (Fig.1 clearly shows all jets 3 are the same length).

Claims 6, 7, 8, 10; the passages (3) are defined by tubes (shown in Fig.1, jets 3 are tubes and are radially arranged; p.3 ll.3-4).

Claim 13; the outer part (3) is thicker than the inner part (the inner part being the filter or retaining layer 2).

Claim 25 the outer part (the honeycomb jet casing containing all of 3) comprising a plurality of substantially parallel passages (3, being radial which applicant has shown

to be substantially parallel p.3 ll.3-4, Fig.1) which are packed together (creating a honeycomb, p.3 ll.3-4) against each other, the passages extending outwardly (being radial p.3 ll.3-4) away from the inner part (2) to outlet ends (at 4), the passages (3) being generally rectilinear (shown to have a rectilinear front view same as applicant Fig.1) and of uniform thickness (each 3 is shown identical Fig.1), each passage (3) having substantially the same diameter along its entire length (same diameter shown in Fig.2) from its inlet end (at 2) to their outlet end (at 4) (Fig.1).

Therefore it would have been obvious to a person having ordinary skills in the art at the time the invention was made to have modified the air system of Kristensson in view of the teaching of the German Patent in order to reduce the exhaust velocity and the investment and energy expenditure is reduced (German patent, p.3 ll.5-7 and 13).

KRISTENSSON in view of German patent teaches the invention above including the length of the passages clearly larger than the width of the passages, however KRISTENSSON in view of the German patent does not teach the passages having a length at least four times their width or the length of each passage is 4-10 times greater than their width.

STRONGIN teaches:

Claim 2; the length of each passage (cell) is 4-10 times greater than their width (the length being 10 times greater than the width, col.2 ll.23-26).

Claim 25; the passages (cells) having a length at least four times their width (the length being 10 times greater than the width, col.2 ll.23-26).

Therefore it would have been obvious to a person having ordinary skills in the art at the time the invention was made to have modified the passages of Kristensson in view of the teaching of the German Patent in view of the passage length of STRONGIN in order to promote uniformity and to smooth-out the turbulence of jets (STRONGIN, col.2 ll.22-23).

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over KRISTENSSON (5,167,577) in view of GERMAN patent (DE 2608792 A) in view of STRONGIN (5,716,268) in further view of MCLAUGHIN (6,368,207).

KRISTENSSON in view of German patent in view of STRONGIN teaches the invention above, however KRISTENSSON in view of German patent in view of STRONGIN do not teach the length of each passage is 4-6 times greater than their width.

MCLAUGHIN teaches:

Claim 3; the length of each passage (36) is 4-6 times greater than their width (col.3 ll.5-7).

Therefore it would have been obvious to a person having ordinary skills in the art at the time the invention was made to have modified the passages of Kristensson in view of the teaching of the German Patent in view of the passage length of STRONGIN in view of the smaller ratio of MCLAUGHIN in order to still provide the smooth flow using less material being cost effective.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over KRISTENSSON (5,167,577) in view of GERMAN patent (DE 2608792 A) in view of STRONGIN (5,716,268) in further view of GOTTSCHALK (EP0787954 A1) provided by applicant.

KRISTENSSON in view of German patent in view of STRONGIN teaches the invention above, however KRISTENSSON in view of German patent in view of STRONGIN do not teach the passages have a circular or substantially circular cross section.

GOTTSCHALK teaches:

Claim4; the passages (3, Fig.9) have a circular or substantially circular cross section (as shown in Fig.9A).

Therefore it would have been obvious to a person having ordinary skills in the art at the time the invention was made to have modified the passages of Kristensson in view of the teaching of the German Patent in view of the passage length of STRONGIN in view of being circular as taught by GOTTSCHALK in order to have smooth surface to achieve a smoother flow.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over KRISTENSSON (5,167,577) in view of GERMAN patent (DE 2608792 A) in view of STRONGIN (5,716,268) in further view of BRIGGS (6,132,318).

KRISTENSSON in view of German patent in view of STRONGIN teaches the invention above including the tubes are made of PCV, however KRISTENSSON in view

of German patent in view of STRONGIN do not teach the tubes are made of a ceramic material

Claim 9; the tubes (268) are made of a ceramic material (col.4 ll.38-40).

Therefore it would have been obvious to a person having ordinary skills in the art at the time the invention was made to have modified the passages of Kristensson in view of the teaching of the German Patent in view of the passage length of STRONGIN in view of being ceramic as taught by BRIGGS since BRIGGS teaches PCV and ceramic being interchangeable to forming a conduit (BRIGGS, col.4 ll.38-40).

Response to Arguments

.Applicant's arguments with respect to claims 2-18, 20, 21, and 15-30 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SAMANTHA MILLER whose telephone number is (571)272-9967. The examiner can normally be reached on Monday - Thursday 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve McAllister can be reached on 571-272-6785. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Samantha A Miller/
Examiner, Art Unit 3749

8/7/2011

/STEVEN B. MCALLISTER/
Supervisory Patent Examiner, Art Unit 3749